

Stage 1: Integrate significant concept, area of interaction and unit question

Area of interaction focus

Which area of interaction will be our focus? Why have we chosen this?

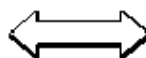
- Health and Social Education
- Environments

The above AOIs were chosen so that at the end of the unit, students are able to answer the following questions, by themselves and analyse some thoughts further. Where do we live (is the air around us acidic, basic, or neutral)? What resources do we have or need (regular use items, including toiletries)? How does it compare to other places around the world (acid in the air and how much, Pollution)? What are my responsibilities to my community and my world? Do I need to change the way I think or act to make my environment a more positive place (use of proper chemical and its disposal)?

Significant concept(s)

What are the big ideas? What do we want our students to retain for years into the future?

though various substance may remain in acidic or basic form, nature prefers neutrality. So most natural things are neutral or close to neutral



MYP Unit Question



What is natural?

(what is natural characteristics of most substances around us and how to determine that)



Assessment

What task(s) will allow students the opportunity to respond to the unit questions?

What will constitute acceptable evidence of understanding? How will students show what they have understood?

titration-simulation

Formative: Other Visual Assessment

Formative: Other Visual Assessment

Students in this assessment has done two titration of weak and strong acid with base using three different indicator (manually and using pH meter) to understand the process of neutralisation and pH change in the

classroom

MYP Objectives

Which specific MYP objectives will be addressed during this unit?

MYP: Sciences (For use from Sept. 2010/Jan. 2011), MYP Year 5, B Communication in science

At the end of the course, students should be able to:

- use scientific language correctly
- use appropriate communication modes such as verbal (oral, written), visual (graphic, symbolic) and communication formats (laboratory reports, essays, presentations) to effectively communicate theories, ideas and findings in science
- acknowledge the work of others and the sources of information used by appropriately documenting them using a recognized referencing system.

IB Expectations/ Assessment Criteria

Which MYP assessment criteria will be used?

MYP: Sciences (For use from Sept. 2005/Jan. 2006), MYP Year 5, Assessment Criteria

Criterion B: communication in science

- The student communicates scientific information effectively using scientific language correctly.
- The student presents all the information appropriately using symbolic and/or visual representation accurately according to the task.
- The student acknowledges sources of information appropriately.

Criterion C: knowledge and understanding of science

- The student explains scientific ideas and concepts and applies scientific understanding to solve problems in familiar and unfamiliar situations.
- The student analyses and evaluates scientific information by making scientifically supported judgments about the information, the validity of the ideas or the quality of the work.

Criterion E: processing data

- The student organizes and transforms data into numerical and diagrammatic forms and presents it logically and clearly, using appropriate communication modes.
- The student explains trends, patterns or relationships in the data, comments on the reliability of the data, draws a clear

conclusion based on the correct interpretation of the data, and explains it using scientific reasoning.

Criterion F: attitudes in science

- The student works largely independently; uses equipment with precision and skill; pays close attention to safety and deals responsibly with the living and non-living environment.
- The student consistently works effectively as part of a team, collaborating with others and respecting their views.

Stage 2: Backward planning: from assessment to the learning activities through inquiry.

Content

What knowledge and/or skills (from the course overview) are going to be used to enable the student to respond to the guiding question?

What (if any) state, provincial, district, or local standards/skills are to be addressed?

How can they be unpacked to develop the significant concept(s) for stage 1?

what is acid and its properties

what are bases, and its properties,

chemical properties of acids and bases

how to measure acidity and basicity

indicator and colour of indicator,

students should be able to write simple acid base neutralisation reaction

salts and how they are formed, naming the acid and base from salt

given properties, identify substances as acids or bases

write simple neutralization reactions when given the reactants

calculate the concentration or volume of a solution, using titration data

identify solutions as acid, base, or neutral based upon the pH

interpret changes in acid-base indicator color

Approaches to Learning

How will this unit contribute to the overall development of subject-specific and general approaches to learning skills?

- **Reflection** students by doing simulation will understand the pH change in titration is very sharp as it closer to the

- Thinking neutralisation. they should apply the acid base neutralisation in general life situation like, bee-stings and other natural phenomenon.

Learning Experiences

How will students know what is expected of them? Will they see examples, rubrics, templates?

How will students acquire the knowledge and practise the skills required? How will they practise applying these?

Do the students have enough prior knowledge? How will we know?

Strategies / Activities / Differentiation

How will we use formative assessment to give students feedback during the unit? What different teaching methodologies will we employ?

How are we differentiating teaching and learning for all? How have we made provision for those learning in a language other than their mother tongue? How have we considered those with special educational needs?

students prior knowledge was tested using "prepost-sheet"

students were asked to work on their initial worksheets, which talks about natural substances, and its acidity and pH.

students are expected to follow the Criteria E and F rubrics which is provided to them for their reference in the laboratory.

student practice their skills in the class, by completing the class assignments. remaining part of the assignment is sent to them in the form of mail for their further support.

in this chapter, students have prior knowledge, except misconception about acids and bases. they learnt salt as new topic.

no differentiation is made, during this unit. students mostly worked in the groups and simulation was handled by few student representatives.

Resources

What resources are available to us?

How will our classroom environment, local environment and/or the community be used to facilitate students' experiences during the unit?

webresources like online titration simulation

Acid base neutralisation Video from you-tube is used to show them neutralisation reaction

powerpoint worksheets for working out in and after the class

Ongoing reflections and evaluation

Unit Reflections

In keeping an ongoing record, consider the following questions. There are further stimulus questions in the unit planning section of *MYP: From principles into practice*.

Students and teachers

What did we find compelling? Was our disciplinary knowledge/skills challenged in any way?

What inquiries arose during the learning? What, if any, extension activities arose?

How did we reflect - both on the unit and on our own learning?

Which attributes of the learner profile were encouraged through this unit? What opportunities were there for student-initiated action?

Possible connections

How successful was the collaboration with other teachers within my subject group and from other subject groups?

What interdisciplinary understandings were or could be forged through collaboration with other subjects?

Assessment

Were students able to demonstrate their learning?

How did the assessment tasks allow students to demonstrate the learning objectives identified for this unit? How did I make sure students were invited to achieve at all levels of the criteria descriptors?

Are we prepared for the next stage?

Data collection

How did we decide on the data to collect? Was it useful?